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Sanyogita Gupta

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EXAMINER

NGUYEN, VAN KIM T

ART UNIT

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2456

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PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

|                              |                                      |                                     |  |
|------------------------------|--------------------------------------|-------------------------------------|--|
| <b>Office Action Summary</b> | <b>Application No.</b><br>10/665,033 | <b>Applicant(s)</b><br>GUPTA ET AL. |  |
|                              | <b>Examiner</b><br>Van Kim T. Nguyen | <b>Art Unit</b><br>2456             |  |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 20 May 2009.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-4,6-9 and 16-24 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-4,6-9 and 16-24 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                       | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>May 20, 2009</u> .  | 6) <input type="checkbox"/> Other: _____                          |

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### **DETAILED ACTION**

1. This Office Action is responsive to communications filed on May 20, 2009.

Claims 5 and 10-15 have been cancelled, new claims 16-24 added; thus claims 1-4, 6-9, and 16-24 remain pending in the application.

### ***Continued Examination Under 37 CFR 1.114***

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on May 20, 2009 has been entered.

### ***Response to Arguments***

2. Applicant's arguments with respect to claims have been considered but are moot in view of the new grounds of rejection.

### ***Claim Rejections - 35 USC § 102***

3. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

4. Claims 16-21 and 23-24 are rejected under 35 U.S.C. 102(e) as being anticipated by Hsu (US 6,363,319).

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Regarding claim 16, as shown in Figures 1-4, Hsu discloses a method for determining a route through a network, comprising:

identifying a plurality of routes, wherein each route comprises a plurality of links (Figure 3, col. 25-67);

calculating a route cost for each route by summing a link cost calculated for each link of the plurality of links (cumulated cost metric; col. 5: lines 44-55); and

selecting a route based on the calculated route costs (least cost path/shortest hop path, minimum cumulative biased cost; col. 5: lines 50-55 and col. 6: lines 56-67),

wherein the link cost for each link is calculated by determining a weighting value for a routing factor of a plurality of routing factors (priority value  $m$ ,  $b_{\max}$ ; col. 6: lines 11-67);

determining a cost value by matching an allowable value of the routing factor to a characteristic of the link (matching hop count to link to determine cost metric; col. 5: lines 44-55);

determining a weighted cost value by combining the determined weighting value with the determined cost value (col. 6: lines 56-61);

repeating the determining operations for each of the plurality of routing factors (col. 6: lines 29-36); and

summing the determined weighted cost value for each of the plurality of routing factors to determine the link cost (col. 6: lines 61-67).

Regarding claim 17, Hsu also discloses the link costs are calculated before identifying the plurality of routes (cost bias is dynamically calculated; col. 6: lines 29-36).

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Regarding claim 18, Hsu also discloses the links costs are calculated as the plurality of routes are identified (cost bias is dynamically calculated; col. 6: lines 29-36).

Regarding claim 19, Hsu also discloses determining if the routing factor applies to the link; and if not, disregarding the link (col. 7: lines 45-55).

Regarding claim 20, Hsu also discloses determining if an allowable value for the routing factor matches a characteristic of the link; and if not, disregarding the link (col. 7: lines 45-55).

Regarding claim 21, Hsu also discloses determining if all of the plurality of routing factors apply to the link; and if not, disregarding the link (col. 7: lines 45-55).

Regarding claim 23, Hsu also discloses the plurality of routes is identified before the link costs are calculated (network topology is determined before calculating link costs; col. 5: lines 25-67).

Regarding claim 24, Hsu also discloses combining the determined weighting value with the determined cost value comprises multiplying the determined weighting value and the determined cost value (col. 6: lines 56-67).

***Claim Rejections - 35 USC § 103***

5. Claims 1-2, 6-9 and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hsu, as applied to claim 16 above, in view of Johnson (US 6,078,946).

Regarding claim 1, Hsu also discloses prioritizing the plurality of routing factors (col. 6: lines 11-55).

However, Hsu does not explicitly disclose for each routing factor, prioritizing the selected allowable values.

Johnson teaches for each routing factor, prioritizing the selected allowable values (e.g., input values representative of attributes, from -5 to +5, with a higher number indicating greater desirability; col. 7: lines 29-30, Tables 1-3); and

It would have been obvious to one of ordinary skill in the art at the time the invention was made to apply Johnson's method of prioritizing selected allowable values in Hsu's system, motivated by the desire to identify the best path based on selected attributes.

Regarding claim 2, Hsu-Johnson also discloses:

determining a weight for each routing factor automatically based on the prioritization of the routing factor (Hsu, col. 12: lines 30-58; and Johnson, col. 9: lines 33-50); and

for each routing factor, determining a cost for each of the allowable values automatically based on the prioritization of the values (Hsu, col. 6: lines 29-36).

Regarding claim 6, Hsu does not explicitly call for selecting the plurality of routing factors from a set of routing factors; for each selected routing factor, selecting one or more of the

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allowable values; assigning a weight to each selected routing factor; and for each selected routing factor, assigning each selected allowable value a cost.

Johnson discloses:

selecting the plurality of routing factors from a set of routing factors (col. 3: lines 56-58 and col. 7: lines 4-10);

for each selected routing factor, selecting one or more of the allowable values (col. 7: lines 29-30; Tables 1-3);

assigning a weight to each selected routing factor (col. 9: lines 33-50); and

for each selected routing factor, assigning each selected allowable value a cost (col. 7: lines 29-30, Tables 1-3).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to apply Johnson's method of prioritizing selected allowable values in Hsu's system, motivated by the desire to identify the best path based on selected attributes.

Regarding claim 7, Hsu-Johnson also discloses the weights assigned to the selected routing factors are based on a prioritization of the factors (Johnson; col. 9: lines 33-50).

Regarding claim 8, Hsu-Johnson also discloses the costs assigned to the selected allowable values for each selected routing factor are based on a prioritization of the allowable values (Johnson; col. 7: lines 29-30, Tables 1-3).

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Regarding claim 9, Hsu-Johnson also discloses the selected one or more allowable values, includes a default value, and wherein the default value matches the characteristic of the link if no other allowable value matches the characteristic of the link (default value for distance of link is hop count; Hsu, col. 5: lines 44-55) .

Regarding claim 22, Hsu-Johnson also discloses determining if an allowable value for the routing factor matches a characteristic of the link; if not, determining if an allowable value has a default value; and if an allowable value has a default value, determining the cost value based on the default value (link cost has a default value of hop count; col. 5: Hsu, lines 44-55).

6. Claims 3-4 rejected under 35 U.S.C. 103(a) as being unpatentable over Hsu, as applied to claim 16 above, in view of Odiaka (US 6,829,347).

Regarding claim 3, Hsu does not explicitly call for determining if the routing factor applies to the link, and if the routing factor does not apply, assigning a large cost value for that factor to the weighting value.

Odiaka teaches determining if the routing factor applies to the link, if the routing factor does not apply, assigning a large cost value for that factor to the weighting value (if a suitable policy service type is not defined, an automated/or non-automated operator may create a suitable profile. Obviously, a large cost value for a weighting value is a possible choice; col. 7: lines 9-54).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to apply Odiaka's method of selecting a trail in Johnson's system, in order to mediate



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between a required class of service requested by a user and the available quality of service which can be supported.

Regarding claim 4, Hsu does not explicitly call for determining if an allowable value matches the characteristic of the link, and if no allowable value matches the characteristic of the link, using a large cost value for the cost value.

Odiaka teaches determining if an allowable value matches the characteristic of the link; and if no selected allowable value for a given selected routing factor matches the characteristics of the link, using a large cost value for the cost value (if a suitable policy service type is not defined, an automated/or non-automated operator may create a suitable profile. Obviously, a large cost value for a routing factor is a possible choice; col. 7: lines 9-54).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to apply Odiaka's method of selecting a trail in Johnson's system, in order to mediate between a required class of service requested by a user and the available quality of service which can be supported.

### ***Conclusion***

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Van Kim T. Nguyen whose telephone number is 571-272-3073. The examiner can normally be reached on 8:00 AM - 4:30 PM.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bunjob Jaroenchonwanit can be reached on 571-272-3939. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Van Kim T. Nguyen  
Examiner  
Art Unit 2456

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/Bunjob Jaroenchonwanit/

Supervisory Patent Examiner, Art Unit 2456